Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NOTES AND LITERATURE.

ZOÖLOGY.

"An Introduction to Vertebrate Embryology" by Dr A. M. Reese[1] is "the result of a need that the author has felt, for some years, for a concise text-book of embryology that described the development of both the chick and the frog" (Preface, p. v). It is questionable if such a need has been generally felt in the presence of existing treatises on embryology, though they may be more "cumbersome and expensive" books than Dr. Reese's. There is something to be said in favor of students becoming acquainted, at first hand, with standard works such as the text-books of Balfour, Hertwig, Marshall, and Minot.

To give a satisfactory account of the development of both the frog and chick within the space limits of a book like Dr. Reese's, the author must be a master of the subject and, equally important, he must be a master of the art of expression in written language. It is unfortunate that Dr. Reese's book does not do justice to its author's knowledge. The fundamental defect of the book — a defect which overshadows good qualities — lies in poor presentation of the subject, and, in a book which does not offer new material, form is the all-important thing, so long as facts are not violated. The account of the development of the optic nerve may be cited as an example of the quality of description. "It is sometimes stated that the *optic nerve* is formed by the hollow stalk of the optic cup; but it is probable that it is formed by an outgrowth of cells from the retina, this outgrowth extending along the optic stalk to the brain, and forming the fibres of the optic nerve. The growth of these fibres may have, as has been mentioned, something to do with the formation of the choroid fissure" (p. 181). What, in the light of this paragraph, is the manner of development of optic nerve fibres? The account of the development of the chick begins with the sentence, "The egg of the chick (Fig. 33) is of large size, ovoid in shape and usually some-

---

[1] Reese, A. M. *An Introduction to Vertebrate Embryology Based on the Study of the Frog and the Chick.* New York, G. P. Putnam's Sons, 1904. XVII + 291 pp., 84 figures.

what larger at one end than at the other" (p. 90). (If the egg of the "chick" were not ovoid, what would its form be?) Then follows what apparently is a description of the egg at the time of laying. In the course of this description it is stated that the yolk exhibits on one side "a small, whitish circle, the *blastoderm* or *cicatricula*" (p. 91). The next paragraph tells us that "Although of so large a size, the yolk of the hen's egg is a single cell, its great size being chiefly due to the large number of yolk granules which it contains "(p. 92). Fortunately, the last paragraph of the section on "The Egg" explains, as if by an afterthought, that "The preceding is a description of the egg at the time of its laying" and that "The statement that the yolk is a single cell is really true only from the time it leaves the ovary until it is fertilized, or until a short time after fertilization, when segmentation begins" (p. 93). Even then we are left in doubt as to the precise time when the egg ceases to be a single cell. It does not tend toward conciseness to make an incorrect statement and then add a paragraph to explain what is "really true."

In the accounts of the visceral apparatus of both frog and chick, an indiscriminate use of the terms *gill*, *branchial*, and *visceral*, as applied to the several arches and clefts, leads to hopeless confusion. It is doubtless by an oversight that the author states that the ectodermal auditory invagination of the frog gives rise to the lining of the middle ear (p. 43). It is a surprise to find the terms *somatopleure* and *splanchnopleure* applied to the parietal and visceral layers of mesoderm respectively. The use of the incorrect plurals "diverticulæ" and "lumena," an apparent failure to appreciate that *nares* is a plural, and reference to nascent organs as rudiments are comparatively unimportant matters. The figures, mainly from Marshall, Duval, and Minot, are well reproduced, but their arrangement in relation to the text could be much more convenient.

A book such as Dr. Reese has proposed should lay down in a few firm bold strokes the main outlines of the subject. Unimportant details should be omitted, important details must be adequately treated. The account must proceed in an orderly constructive way, always complete so far as it has progressed, like the development it portrays. There must be such unfailing accuracy and such clearness of statement that misconception is impossible. If Dr. Reese's book is not an unqualified success, it is because the author undertook a very difficult task.

H. W. R.